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| 10/033,738 | 12/27/2001 | Parthasarathy Ranganathan | 18973-74 (P01-3809US) | 7447 |
| 37509 | 7590 | 02/12/2004 | EXAMINER | |
| DECHERT LLP P.O. BOX 10004 PALO ALTO, CA 94303 | | | PATEL, RAMESH B | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2121 | |
| DATE MAILED: 02/12/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Ppe

Office Action Summary

Application No.

10/033,738

Applicant(s)

RANGANATHAN ET AL.

Examiner

Ramesh B. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5 and 6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-32 are presented for examination.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 4/15/2002 and 12/27/2001 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements being considered by the examiner.

Specification

3. The abstract of the disclosure is objected to because the abstract contains the term "so at" should be "so as". Correction is required. See MPEP § 608.01(b).
4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

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5. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Claim Objections

6. Claims 19-20 are objected to because of the following informalities:

Claims 19, 19, appeared twice (i.e. there are two 19 # claims in the application filled and claim 20 depends o claim 19). Examiner is not sure regarding claim 20 about which of two 19 claim should be considered for claim 20 for its dependency.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 26-27, the phrase "such as" and/or "so as to" and/or "so at to" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 30, line 4, the phrase "for example" and/or "that of applications" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

The term "a display is capable of supporting fine-grained control" in claim 30, line 5 is a relative term which renders the claim indefinite. The term "a display is capable of supporting fine-grained control" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. "fine-grained control".

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Dependent claims, which are not particularly rejected, are rejected based on the rejected base claim. Applicant is suggested to review entire disclosure and make appropriate correction as required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-32 are rejected under 35 U.S.C. 102(b) based upon a public use or sale of the invention. Claims 1-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Reinhardt et al. (US Patent 5,598,565).

As to claims 1, 26-27 and 30, Reinhardt teaches the invention including a method and a system for energy-aware software control of a display in a computer system so as to reduce energy consumed by the display, comprising: profiling screen usage patterns and their impact on energy consumption by the display, the profiling resulting in an energy model (see, abstract and figure 1); determining when to prompt the energy-aware software control of the display in order to decrease its energy consumption (see, abstract and col. 2, lines 7-21); determining which screen portions of the display and what display parameters to control based on the energy model (see, abstract and col. 2, lines 7-21 and col. 4, lines 10-21); and for each portion of the display to be controlled,

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controlling its display parameters, wherein the screen portions are controlled to attain energy conservation (see, abstract and col. 4, lines 10-21).

As to claims 2, Reinhardt teaches the method and the system wherein the computer system is a mobile computing system (see, abstract and col. 2, lines 1-6).

As to claims 3-4, Reinhardt teaches the method and the system wherein the energy-aware software control provides the control at a pixel-level of display granularity and at a tile-level grid-level or frame-level of display granularity (see, abstract and col. 4, lines 10-28).

As to claims 5, Reinhardt teaches the method and the system wherein the screen portions are controlled to dim their illumination relative to a screen area of focus which is highlighted, a dimming range being provided to accommodate user preferences and render the energy-aware software control less intrusive on a user experience (see, abstract and col. 2, lines 1-21 and col. 4, lines 30-42).

As to claims 6-7, Reinhardt teaches the method and the system wherein the controlled display parameters include a refresh rate the values of which being limited to a range that is provided to accommodate user preferences and render the energy-aware software control less intrusive on a user experience, the refresh rate of the screen portions being controlled within that range and the energy-aware software

control is functioning at a particular level of the computing environment in the computer system, that level being an operating system level, an applications level, a firmware level, or, if the computing environment is a windowing environment, a windows manager level, or any combination thereof (see, abstract and col. 4, lines 30-60).

As to claims 8-11, Reinhardt teaches the method and the system wherein the energy model is created on the basis of profiling parameters, the energy model being a static and/or a dynamic model of screen usage patterns and wherein the energy model identifies screen usage patterns of typical applications that run in the computer system if the computer system has a computing environment that is windows-based the energy model can include an average screen area used by a window of focus, an average screen area used by other windows, and a level of minimum brightness to which a screen area can be brought wherein the energy model contains data including areas of the screen that do not require full use of the display functionality for long time periods (see, abstract and figures 1-2 and col. 4, lines 30-60).

As to claims 12-14, Reinhardt teaches the method and the system wherein an area of focus on the screen that remains highlighted relative to the screen portions that are controlled consumes higher energy than these screen portions, and wherein the area of focus is determined on the basis of heuristics derived from parameters in the energy model, user or application-controlled indications as to which screen areas are outside of the area of focus, or dynamic observations of the parameters from the energy

model wherein the heuristics can vary with the applications and can be embodied in the applications (see, abstract and col. 2, lines 1-22 and col. 4, lines 30-60).

As to claims 15-17, Reinhardt teaches the method and the system wherein in a windows-based environment of the computer, system the area of focus can be correlated to a window of interest, to a frame-of focus and to a cursor position, or an icon (see, abstract and col. 4, lines 10-28).

As to claims 18-19, Reinhardt teaches the method and the system wherein the controlled display parameters are any energy-consuming parameters including one or a combination of intensity, refresh rate, gray scale and color wherein, by controlling the screen portions to attain the energy conservation, the controlling being characterized in that only screen areas of interest are highlighted, the energy-aware software control is associated with reduced amounts of computations required for image processing in producing a screen and wherein the energy-aware software control is prompted to provide either automatic control of the display based on monitored metrics or user-initiated control wherein the monitored metrics include battery current (see, abstract and col. 4, lines 10-28 and col. 6, lines 20-56).

As to claims 21-25, Reinhardt teaches the method and the system wherein the energy-aware software control can be turned on or off by a user of the computer system wherein the screen portions are controlled at a pixel-levels of display granularity, and

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wherein each pixel to be controlled is so marked and wherein controlled display parameters corresponding to the screen portions can reach a threshold or round-off level wherein the threshold or round-off levels are set so as avoid an impact that is intrusive on a user experience wherein a pixel is marked based on a comparison between required or measured level of its display parameters and a maximum level of its display parameters, such that if the required or measured level is lower than the maximum level the pixel is a candidate for control (see, abstract figures 1-2 and col. 4, lines 10-60 and col. 6, lines 20-56).

As to claims 28-29, Reinhardt teaches the method and the system wherein the display is configured with a display technology which is one of an organic light emitting diode (OLED) technology, liquid crystal display (LCD) technology, inorganic electroluminescent (EL) display technology, field emission display technology and CRT technology, each of which being capable of supporting the energy-aware software control at a fine level of granularity corresponding to elements of the individual portions of the display wherein the fine level of granularity is a tile, grid, matrix or pixel (see, abstract and figures 1-2 and col. 4, lines 10-28).

As to claims 31-32, Reinhardt teaches the method and the system wherein the power source is a battery and the power metrics include battery current, and wherein monitoring the battery current allows automatic prompting of the energy-aware software control and further comprising: means for allowing a user to turn the energy-aware

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software control on/off via the user interface (see, abstract and figures 1-2 and col. 4, lines 30-60).

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh B. Patel whose telephone number is 703-308-6673. The examiner can normally be reached on M-Th; 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anil Khatri can be reached on 703-305-0282. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-9051 for regular communications and 703-305-3718 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


Ramesh B. Patel
Primary Examiner
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February 9, 2004